

GENERAL

SPECTRUM DRIVE IS ASSUMED TO RUN IN A EAST-WEST DIRECTION AT HOLIDAY DRIVE.

THE INTERSECTION SHALL OPERATE IN A NEMA (8) EIGHT PHASE, FULL- TRAFFIC-
ACTUATED MODE, WITH A PUSHBUTTON ACTUATED PEDESTRIAN MOVEMENT
TO CROSS THE WEST LEG OF SPECTRUM DRIVE AND NORTH LEG OF HOLIDAY DRIVE.

SPECIAL NOTES:

- EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY THE COUNTY

QUANTITY	DESCRIPTION
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1 EA [UPDATED] (CONT/CAB/ADD) DETECTOR RACK POWER SUPPLY
1 EA (CONT/CAB/ADD) DETECTOR AMPLIFIER 4-CH RACK MT
3 EA [UPDATED] 4 CHANNEL DETECTOR AMPLIFIER
1 EA CABINET W/ TELEMETRY (SYSTEM CAB), SIZE 6
85 SF SHEET ALUMINUM SIGN
2 EA W3-3 (New Signal Ahead) (36"x36") GROUND MOUNTED
2 EA D-3(1) (Spectrum Dr) (VAR.X16") MAST ARM MOUNTED
2 EA D-3(1) (Holiday Dr) (VAR.X16") MAST ARM MOUNTED
1 EA R3-5L (Left Turn Only) (30"x36") MAST ARM MOUNTED

1 EA R3-6(1)L (30"x36") MAST ARM MOUNTED

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## EQUIPMENT LISTS

(cont.)

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

| QUANTITY | DESCRIPTION |
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|----------|-------------|

- |      |    |                                                                       |
|------|----|-----------------------------------------------------------------------|
| 2    | EA | MAINTENANCE OF TRAFFIC PER ASSIGNMENT                                 |
| 4    | CY | TEST PIT EXCAVATION                                                   |
| 137  | LF | 12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS    |
| 135  | LF | 24 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS    |
| 24   | EA | 12 INCH RED OR GREEN LED SIGNAL HEAD SECTION                          |
| 1    | EA | 2 WIRE CENTRAL CONTROL UNIT                                           |
| 8    | EA | 8 INCH LED SIGNAL R.Y.G HEAD SECTION                                  |
| 2    | EA | AUDIBLE / TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS             |
| 1    | EA | BREAKAWAY PEDESTAL POLE - ANY SIZE                                    |
| 1    | EA | EMBEDDED METERED SERVICE PEDESTAL                                     |
| 2    | EA | LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD                          |
| 230  | LF | 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED                       |
| 250  | LF | ELECTRICAL CABLE - 2 CONDUCTOR NO 12 AWG - TRAY CABLE                 |
| 13   | CY | CONCRETE FOR SIGNAL FOUNDATION                                        |
| 70   | LF | WOOD SIGN SUPPORTS 4 INCH X 4 INCH                                    |
| 365  | LF | NO. 6 AWG STRANDED BARE COPPER GROUND WIRE                            |
| 575  | LF | 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED                       |
| 20   | LF | 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED                       |
| 80   | LF | 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED                        |
| 265  | LF | 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED                        |
| 66   | LF | 1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE |
| 30   | LF | ELECTRICAL CABLE 1 CONDUCTOR NO. 4 AWG THHN/THWN                      |
| 4    | EA | NONINVASIVE DETECTOR, 500 FOOT LEAD IN CABLE                          |
| 11   | EA | FURNISH AND INSTALL ELECTRICAL HANDHOLE                               |
| 18   | SF | INSTALL GROUND MOUNTED SIGN                                           |
| 67   | SF | INSTALL OVERHEAD SIGN                                                 |
| 2    | EA | 250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE                      |
| 4    | EA | GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH                       |
| 4    | EA | 8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION                          |
| 12   | EA | 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION                         |
| 1490 | LF | ELECTRICAL CABLE - 2 CONDUCTOR ALUMINUM SHIELDED                      |
| 180  | LF | ELECTRICAL CABLE - 2 CONDUCTOR NO. 14 AWG                             |
| 280  | LF | ELECTRICAL CABLE - 5 CONDUCTOR NO 14 AWG                              |
| 920  | LF | ELECTRICAL CABLE - 7 CONDUCTOR NO 14 AWG                              |
| 3460 | LF | LOOP WIRE ENCASED IN FLEXIBLE TUBING NO 14 AWG                        |
| 932  | LF | SAW CUT FOR SIGNAL - LOOP DETECTOR                                    |
| 1    | EA | INSTALL CONTROLLER AND CABINET - BASE MOUNT                           |
| 1    | EA | F & I Steel Pole With Twin 50' And 60' Mast Arms                      |
| 1    | EA | F & I Steel Pole With Twin 50' And 50' Mast Arms                      |
| 1    | EA | F & I 10' Lighting Arm On Signal Structure                            |
| 1    | EA | F & I 15' Lighting Arm On Signal Structure                            |

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. DAVE COYNE  
DISTRICT ENGINEER  
PHONE: (301) 624-8140

MR. JOHN CONCANNON  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (301) 624-8141

MR. LEON KERNS  
ACTING ASSISTANT DISTRICT ENGINEER  
MAINTENANCE  
PHONE: (410) 624-8140

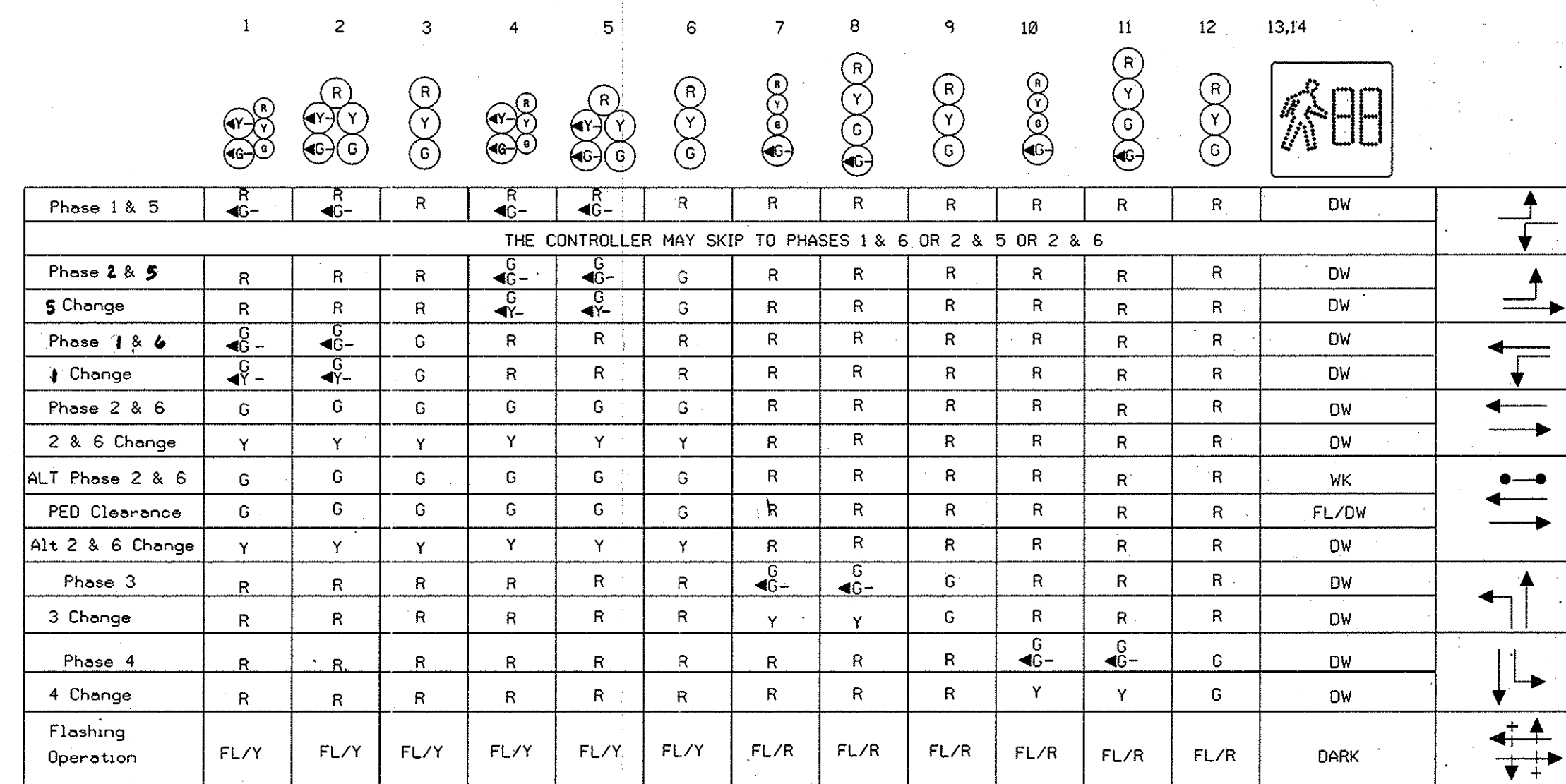
MS. ANDREA ABEND  
DISTRICT UTILITIES ENGINEER  
PHONE: (310) 624-8115

MR. RICHARD L. DAFF, SR.  
CHIEF, TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7630

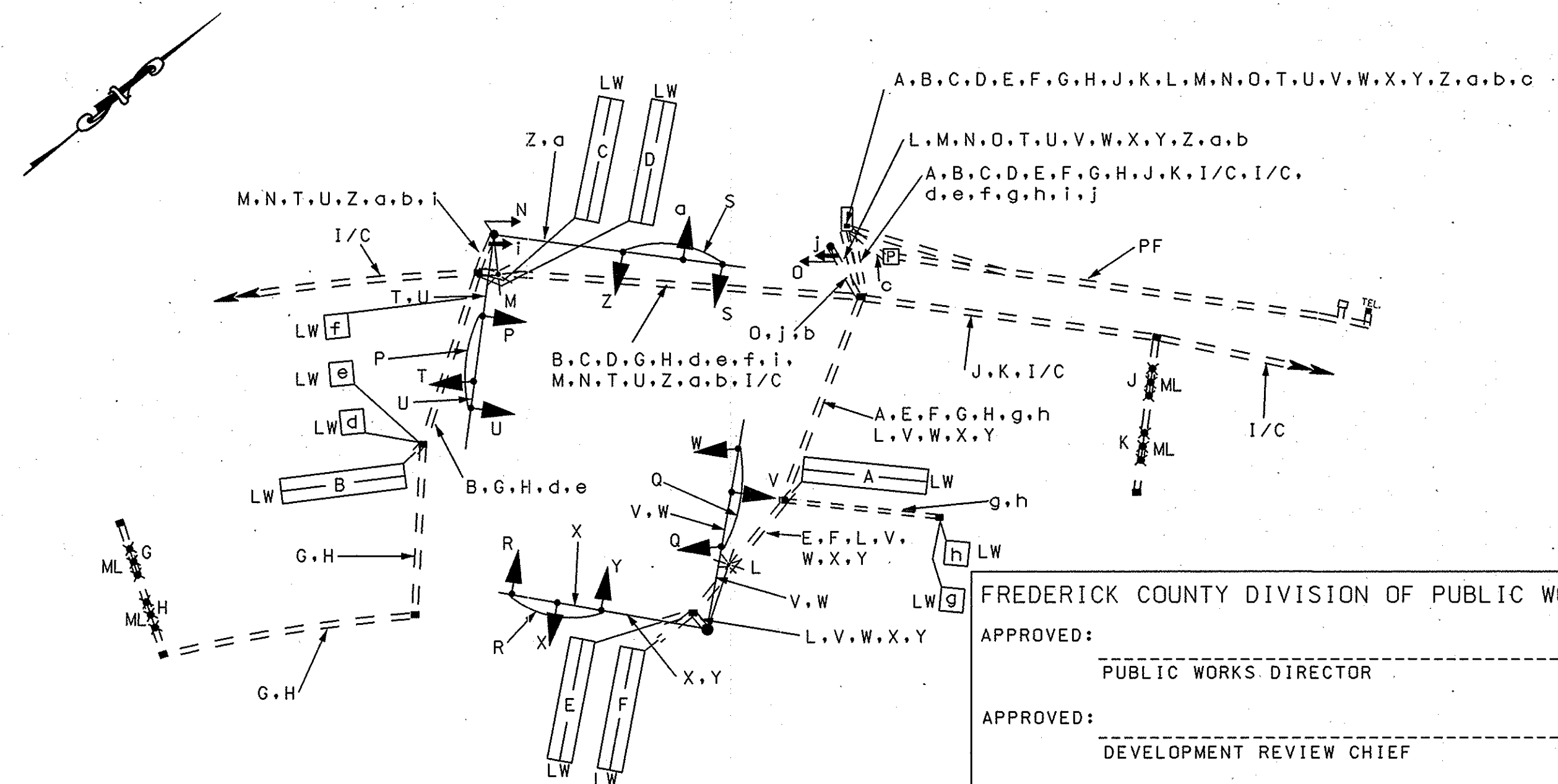
THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.

- STANDARD NO. MD-104.00 - 104.00-30  
STANDARD NO. MD-104.31-01 (FLAGGING OPERATION)  
STANDARD NO. MD-104.33-01 (SHOULDER WORK)  
STANDARD NO. MD-104.35 (LANE SHIFT)  
STANDARD NO. MD-104.32-01 (INTERSECTION FLAGGING  
OPERATION)

### PHASE CHART



### WIRING DIAGRAM



### WIRING KEY

- |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A,B,C,D,E,F,<br>d,e,f,g,h<br>G,H,J,K<br>i,j<br>L,M<br>N,O,P,Q,R,S<br>T,U,V,W,X,Y,Z,a<br>b<br>c<br>+<br>PF<br>ML<br>LW<br>[P] | 2 CONDUCTOR (ALUMINUM SHIELDED) ELECTRICAL CABLE<br>NON-INVASIVE PROBE LEAD-IN CABLE<br>2 CONDUCTOR CABLE (NO.14 AWG)<br>2 CONDUCTOR TRAY CABLE (NO.12 AWG)<br>5 CONDUCTOR (NO.14 AWG)<br>7 CONDUCTOR (NO. 14 AWG)<br>STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)<br>3 WIRE (NO.4 AWG) FOR TRAFFIC SIGNAL ELECTRICAL SERVICE<br>GROUND ROD<br>PROPOSED UNDERGROUND FEED-BY ALLEGHENY POWER<br>NON-INVASIVE PROBE<br>LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. #14 AWG)<br>METERED SERVICE PEDSTAL |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

FREDERICK COUNTY DIVISION OF PUBLIC WO

APPROVED: \_\_\_\_\_  
PUBLIC WORKS DIRECTOR

APPROVED: \_\_\_\_\_  
DEVELOPMENT REVIEW CHIEF D

APPROVED: \_\_\_\_\_  
STORMWATER MANAGEMENT D.

APPROVAL IS VALID FOR TWO (2) [ ONE YEAR IF THE COUNTY WATER AND SEWER IS INVOLVED] YEARS AFTER LAST DATE SHOWN ABOVE. THE PROJECT MUST BE UNDER CONSTRUCTION BEFORE SAID DATE TO BE CONSIDERED ACTIVE. OTHERWISE, RESUBMITTAL OF PLANS MUST BE MADE TO DEVELOPMENT REVIEW FOR REAPPROVAL. REVIEW FEES NECESSARY FOR REAPPROVAL SHALL ACCOMPANY RESUBMITTAL. FEES CANNOT BE WAIVED.

| REV # | DATE | REVISION DESCRIPTION<br>*FILL IN THESE BLOCKS<br>FOR REVISIONS ONLY | CONSULTANT<br>DATE AND<br>INITIAL | DEV. RE<br>DATE AND<br>INITIAL |
|-------|------|---------------------------------------------------------------------|-----------------------------------|--------------------------------|
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FREDERICK COUNTY, MARYLAND  
DIVISION OF PUBLIC WORKS  
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION  
OFFICE OF TRANSPORTATION ENGINEERING  
FREDERICK COUNTY, MARYLAND

SPECTRUM DRIVE IMPROVEMENTS  
SPECTRUM AND HOLIDAY DRIVE  
TRAFFIC SIGNAL GENERAL NOTES

DATE: 1/23/06 SCALE: 1" = 100'

PROJECT NO:14-9899-C28385 DWG. 51 OF 62

**BAI** BRUDIS & ASSOCIATES, INC.  
CONSULTING ENGINEERS

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